Data Encryption Workshop

Billing Description

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Contents

1 Billing Overview

In this document, you will learn about how Data Encryption Workshop (DEW) is billed, how you can renew subscriptions and manage costs, and what happens if your account goes into arrears.

DEW is charged for three microservices: Key Management Service (KMS), Cloud Secret Management Service (CSMS), and Dedicated Hardware Security Module (Dedicated HSM).

- **Billing Modes**

  There are yearly/monthly and pay-per-use billing modes. Each one has different advantages and disadvantages. Yearly/Monthly is a prepaid mode. You need to pay first, and will be billed based on the required duration in your order. Ensure that your account balance is sufficient. Pay-per-use billing mode is a postpaid mode. In this mode, you pay for what you used. For details about billing modes, see **Billing Modes Overview**.

- **Billed Items**

  The billing items of DEW consist of the key fee, secret fee, and Dedicated HSM instance fee. For details about the billing factors and formulas of each billing item, see **Billing Items**.

  For more information about the billing samples and the billing for each item, see **Billing Examples**.

- **Renewing Subscriptions**

  If you do not renew a yearly/monthly Dedicated HSM instance on time before it expires, the instance cannot be used. If you want to continue using a Dedicated HSM instance, you need to renew the instance within the specified period. Otherwise, the instance will be frozen. For more information about renewal, see **Renewing Subscriptions**.

- **Viewing Bills**

  You can choose **Billing & Costs** > **Bills** to check the DEW transactions and bills. For details, see **Viewing Bills**.

- **Arrears**

  Your account goes into arrears when the balance cannot cover the bill you need to pay. If your account is in arrears, the website may loss protection. You need to top up your account in a timely manner. For details, see **About Arrears**.

- **Stopping Billing**

   If you no longer need to use your cloud service, you can unsubscribe from or delete it to stop the billing. For details, see **Stopping the Billing**.

- **Managing Costs**

   DEW costs include costs of ownership and O&M. You can optimize costs through cost collection, resource optimization, upgrade, thrift, and automatic O&M. For details, see **Cost Management**.

2 Billing Modes

2.1 Overview

Dedicated HSM instances in DEW support the yearly/monthly (prepaid) billing mode. KMS and CSMS support the pay-per-use (postpaid) billing mode.

- Yearly/Monthly billing: A prepaid mode in which you pay for the service before using it. Your bill is settled based on the required period. The longer you use the service, the more discounts you got. This mode is applicable to mature services that have long-term and stable device requirements.

- Pay-per-use billing: a postpaid mode in which you pay for what you used. You are billed by second based on the actual usage. Your bill is settled by the hour. With the pay-per-use billing mode, you can easily adapt to resource requirement changes, reducing the risk of over-provisioning of resources or lacking capacity. In this mode, there are no upfront commitments required. This mode is ideal for scenarios with volatile resource demands, such as e-commerce flash sale, where resource usage fluctuates rapidly.

Table 2-1 Billing modes

Billing Mode	Yearly/Monthly Billing	Pay-per-Use Billing
Payment method	Prepaid Billed by the purchase period specified in your order	Postpaid Billed by service duration.
Billing period	Billed by the purchase period specified in the order	Billed by the second. A bill is generated on the hour.
Billing items	Dedicated HSM instance	KMS and CSMS
Changing the billing mode	The billing mode cannot be changed to pay-per-use.	The billing mode cannot be changed to yearly/monthly.

Billing Mode	Yearly/Monthly Billing	Pay-per-Use Billing
Application scenario	This billing mode is cost-effective and suitable when the duration of resource usage is predictable. The yearly/monthly mode is recommended for long-term users.	This mode is suitable when you want more flexibility and control on resource usage.

2.2 Yearly/Monthly Billing

Yearly/Monthly billing is a prepaid billing mode in which you pay before using resources. It is suitable when your resource requirements are fixed because you can pay less by using longer. In the yearly/monthly billing mode, we offer discounts to you. This section describes the yearly/monthly billing rules of Dedicated HSM instances in DEW.

Application Scenarios

In yearly/monthly billing mode, you need to pay for a required duration in advance. This mode is suitable for long-term and relatively fixed service requirements. The yearly/monthly billing mode is recommended for the following scenarios:

- Stable resource demands: For services with long-term, stable resource requirements, the yearly/monthly billing mode offers high cost-effectiveness.
- Long-term projects: For long-term projects, the yearly/monthly billing mode ensures stable resource usage throughout the project period.
- Predictable service peaks: To prevent resource shortages during service peaks, you can purchase yearly/monthly resources beforehand to meet peak requirements.
- High data security: For services that require high data security, yearly/monthly billing can avoid service unavailability caused by payment in arrears.

Applicable billing items

The following billing items support yearly/monthly billing.

Table 2-2 Applicable billing items

Billing Items	Description
Dedicated HSM instance	Dedicated HSM instances can only be purchased in yearly/monthly mode.

Billing Description

When purchasing a Dedicated HSM instance of platinum edition (outside Chinese mainland), you need to determine the purchase and quotation solutions based on actual requirements.

📖 **NOTE**

You can submit a service ticket to describe your requirements. Huawei Cloud will contact you.

Impacts of Expiration

Periods of yearly/monthly DEW resources describes the status of yearly/monthly DEW resources in each phase. After DEW is purchased, it enters the valid period and runs normally during this period. If DEW is not renewed after it expires, before being deleted, it first enters a grace period and then a retention period.

Figure 2-1 Periods of yearly/monthly DEW resources
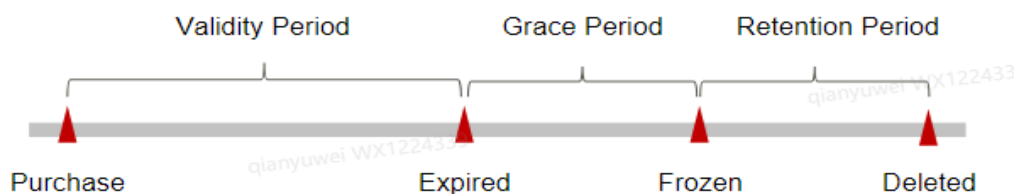
Expiration Alert

From the 7th day before yearly/monthly DEW resources expire, the system will send an expiration reminder to the creator of the account by email, SMS, and internal message.

Impacts of Expiration

If your yearly/monthly DEW resource is not renewed after expiration, it first enters the grace period and its status changes to **Expired**. Within the grace period, you can access the instance

If you do not renew the yearly/monthly DEW resource within the grace period, the resource enters the retention period and the resource status changes to **Frozen**. You cannot perform any operation on the yearly/monthly resource in the retention period.

If the yearly/monthly DEW resource is not renewed after the retention period expires, the resources will be released and data cannot be restored.

2.3 Pay-per-Use Billing

Pay-per-use billing means you pay nothing up front and are not tied into any contract or commitment. This section describes the billing rules for pay-per-use DEW instances.

📖 **NOTE**

> If the billing date is the first or last day of a month, the fee is the usage of the entire month.

Application Scenarios

Pay-per-use billing is good for short-term, bursty, or unpredictable workloads that cannot tolerate any interruptions, such as applications for e-commerce flash sales, temporary testing, and scientific computing.

Billed Items

The following billing items support pay-per-use billing.

Table 2-3 Applicable billing items

Billing Items	Description
KMS	Fees for key instances created on demand and API requests generated by keys.
CSMS	Fees for key instances created on demand and API requests generated by keys.

Assume that you create a symmetric key whose key algorithm is AES_256. At the bottom of the creation page, you can view the fee details, as shown in **Example prices**.

Figure 2-2 Example prices

Key Price	$0.0014/key/hour
API Request Price	$0.00/10,000 calls(0 to 20,000)
	$0.03/10,000 calls(20,001 and above)

This price is an estimate and may differ from the final price. Pricing details

The fee calculation includes:

- Key instance fee: The created key is charged by duration.
- API request fee: After a key is created, you are charged based on the number of API requests. Each key has 20,000 free requests per month.

Billed Usage Period

In pay-per-use billing mode, KMS resources are billed by hour. The key instance fee is generated once a day (UTC+8), and the key API request fee is generated once a

month (UTC+8). After the bill is generated, a new billing cycle starts. The billing starts when the key is successfully created and ends when the key is scheduled to be deleted.

For example, if you created a custom key at 8:45:30 and deleted it at 9:40:08, the billing cycle is from 8:00:00 to 10:00:00. You are billed for the 600 seconds from 8:45:30 to 8:55:30.

Billing Examples

Suppose you created a custom key at June 8, 2023, 9:59:30 and deleted it on June 8, 2023, 10:45:46. The number of API calls using keys is 36,594 within a billing period. The usage period as follows:

- The first billing period is from 9:00:00 to 10:00:00. Fees are generated from 9:59:30 to 10:00:00. The billing duration is 30 seconds within the period.

- The second billing period is from 10:00:00 to 11:00:00. Fees are generated from 10:00:00 to 10:45:46. The billing duration is 2,746 seconds within the period.

You need to pay for each billing cycle. Each resource is billed separately. For details, see **Billing formula**. The price of a resource listed in the product pricing details is per hour, so divide it by 3,600 to obtain the price for each second.

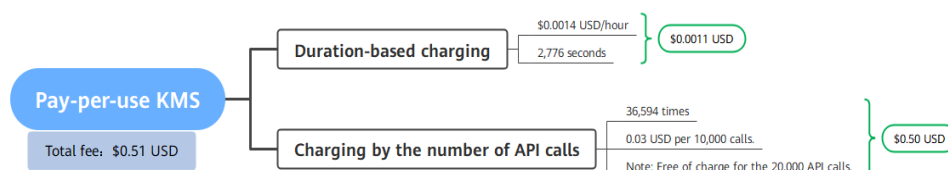**Table 2-4** Billing formula

Resource	Formula
Custom keys	Key instance fee x Duration + Number of API requests x API request fee

Total price for a pay-per-use KMS shows how the total price is calculated.

> **NOTICE**
>
> The prices in the figure are examples only. The actual prices are those displayed on **DEW Pricing Details**.

Figure 2-3 Total price for a pay-per-use KMS

Impact of Arrears

Lifecycle of a pay-per-use KMS shows the statuses a pay-per-use KMS can have throughout its lifecycle. After you purchase a KMS resource, the resource runs properly within the billing period. This phase is the validity period. If you do not need to use the resource, the resource enters the retention period. After the retention period ends, the resource is deleted.

Figure 2-4 Lifecycle of a pay-per-use KMS
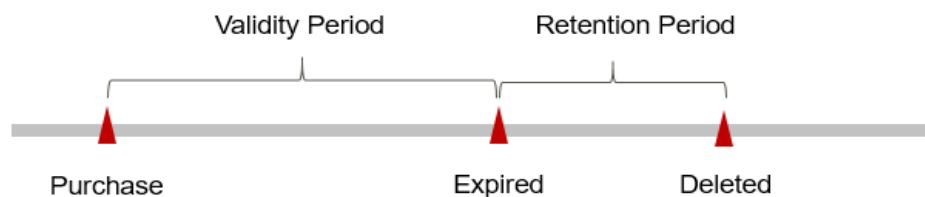
Arrears Reminder

The system will bill you for pay-per-use resources after each billing cycle ends. If your account goes into arrears, we will notify you by email, SMS, or in-app message.

Impacts of Arrears

Your account may fall into arrears if it cannot cover the bill you need to pay. and the pay-per-use KMS enters the grace period. Your account goes into arrears, and the pay-per-use KMS enters the grace period. You are still responsible for expenditures generated during the grace period. You can view the charges on the **Billing Center** > **Overview** page and pay any past due balance as needed.

If you do not bring your account balance current before the grace period expires, the status turns to **Frozen** and enters a retention period. You cannot perform any operations on a pay-per-use KMS in the **Frozen** status.

After the retention period ends, the resources in DEW will be released and data cannot be restored.

> 📖 **NOTE**
>
> - For details about how to top up your account, see **Topping Up an Account**.

3 Billing Items

Billing

You will be billed for KMS, CSMS, and Dedicated HSM. For details, see **Table 3-1**.

> **NOTICE**
>
> For details, see **Price Calculator**.

Table 3-1 DEW billing items

Billing Items	Specifications	Description	Billing Mode	Formula
KMS	Custom keys	Custom keys are created or imported by users using KMS.	Pay-per-use	Key instance fee x Duration + Number of API requests x API request fee
	Default keys	A default key is automatically created by another cloud service using KMS, such as Object Storage Service (OBS). The alias of a default key ends with **/default**.	Pay-per-use	Number of API requests x API request fee
CSMS	Shared secrets	Full lifecycle management is supported for customized secrets in different scenarios.	Pay-per-use	Secret instance fee x Duration + Key instance fee x Duration + Number of API requests x API request fee

Billing Items	Specifications	Description	Billing Mode	Formula
Dedicated HSM instance	Platinum edition (outside Chinese mainland)	Dedicated HSM is a cloud service used for encryption, decryption, signature, signature verification, key generation, and the secure storage of keys.	Yearly/Monthly	Confirm the quotation solution based on actual requirements.

Charging Constraints

- A disabled key is still billable. Only deleted keys are not charged.
- A CMK in pending deletion status does not incur charges. If you cancel deletion, the charging resumes from the time when the CMK was scheduled to be deleted.

Billing Examples

Suppose you created a custom key at June 8, 2023, 9:59:30 and deleted it on June 8, 2023, 10:45:46. The number of API calls using keys is 36,594 within a billing period. The usage period as follows:

- The first billing period is from 9:00:00 to 10:00:00. Fees are generated from 9:59:30 to 10:00:00. The billing duration is 30 seconds within the period.
- The second billing period is from 10:00:00 to 11:00:00. Fees are generated from 10:00:00 to 10:45:46. The billing duration is 2,746 seconds within the period.

Figure Pay-per-use KMS billing shows how the total price is calculated.

NOTICE

The prices in the figure are only for reference. For details, see **DEW Pricing Details**.

Figure 3-1 Total price for a pay-per-use KMS
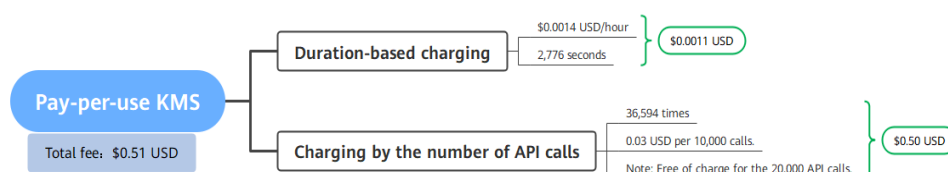
For pay-per-use billing examples, see **Billing Examples**.

4 Billing Examples

Billing Scenario

A user created a symmetric key at 14:25:00 on May 18, 2023 and used the key to encrypt OBS. During the use of the key, 164,573 API requests were generated. The user stopped using the key and deleted it at 16:14:00 on June 29, 2023.

So how much will the user be billed in May and June?

Billing Analysis

- Charging by key duration

  May 18, 2023, 14:25:00 to June 29, 2023, 16:14:00 The charging formula is as follows:

  Duration fee = Storage duration x Key instance fee

  In this example, the duration is 42 days, 1 hour, and 49 minutes. Duration = 42 x 24 + 1.82 = 1009.82 hours. The duration fee is calculated as follows: 1009.82 x 0.0014 = $1.41 USD.

- Charging for API requests

  Request fees generated by calling the API

  API request fees = (Number of API requests - 20,000 x Number of requests in a month)/10,000 x API request fees

  In this example, the total number of API calls is 164,573. The first 20,000 times of API calling is free of charge each month from May to June. The API request fee is calculated as follows: (164,573 – 20,000 x 2)/10,000 x 0.03 (per 10,000 API calls) = $0.37 USD.

From May to June, the total price of DEW is 1.41 + 0.37 = $1.78 USD.

5 Renewing Subscriptions

5.1 Overview

When to Renew Subscriptions

If a yearly/monthly instance is about to expire but you want to continue using it, you need to renew the Dedicated HSM instances within a specified period.

Only yearly/monthly Dedicated HSM instances can be renewed. If you use pay-per-use mode, just ensure that your account balance is sufficient.

If you renew the instance before it expires, resources will be retained and you can continue using the instance. For details about the instance statuses after they have expired and the associated impacts, see **Impacts of Expiration**.

How to Renew Subscriptions

Table 5-1 lists the functions related to yearly/monthly renewal of Dedicated HSM.

Table 5-1 Renewal-related functions

Method	Description
Manual renewal	You can renew a yearly/monthly Dedicated HSM instance on the console any time before it is automatically deleted.
Auto renewal	You can enable auto-renewal to automatically renew the Dedicated HSM instances before it expires. This prevents resources from being deleted in case you forget to renew a subscription.

You can select a method to renew a yearly/monthly Dedicated HSM instance based on the phase the instance is currently in. For details, see **Dedicated HSM instance lifecycle**.

Figure 5-1 Dedicated HSM instance lifecycle
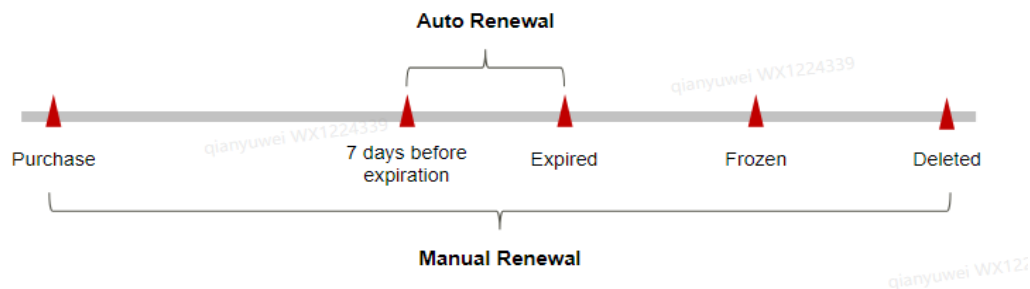
- Dedicated HSM instances are in the **Running** state after it is provisioned.
- If the Dedicated HSM instance is not renewed upon expiration, it enters the grace period. If the instance is not renewed after the grace period expires, the status changes to **Frozen**.
- If you do not renew the subscription before the retention period expires, your resources will be automatically deleted.

You can enable auto-renewal any time before the Dedicated HSM instance expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00, seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires. You can change the auto-payment date for renewal as required.

5.2 Manually Renewing DEW

You can renew a yearly/monthly DEW anytime on the console before it is automatically deleted.

Renewing a Subscription on the Console

Step 1 **Log in to the management console**.

Step 2 Click ![icon] in the upper left corner of the management console and select a region or project.

Step 3 In the navigation on the left, choose ![menu icon] > **Security & Compliance** > **Data Encryption Workshop**.

Step 4 In the navigation pane on the left, choose **Dedicated HSM** > **Instances**.

Step 5 In the row containing the desired instance, click **Renew**. The **Renew** page is displayed.

Step 6 On the renewal page, select the renewal duration, for example, 1 year.

Step 7 (Optional) Set **Renewal Date**. By default, the renewal time is set to 23:59:59 GMT +08:00 on the first day of each month.

Step 8 Click **Pay**.

----End

Renewing a Subscription in Billing Center

Step 1   **Log in to the management console**.

Step 2   In the upper right corner of the page, choose **Billing & Costs** > **Renewal**. The **Renewals** page is displayed.

Step 3   On the **Manual Renewals** tab page, click **Renew** in the row where the instance is located.

Step 4   On the renewal page, select the renewal duration, for example, 1 year.

Step 5   (Optional) Set **Renewal Date**. By default, the renewal time is set to 23:59:59 GMT +08:00 on the first day of each month.

Step 6   Click **Pay**.

----End

5.3 Auto-renewing DEW

Auto-renewal can prevent Dedicated HSM instances from being automatically deleted if you forget to manually renew them. The auto-renewal rules are as follows:

- The first auto-renewal date is based on when the Dedicated HSM instance expires and the billing cycle.

- The auto-renewal period of Dedicated HSM instances depends on the subscription term. For example, if you select a 3-month duration, the instance automatically renews the subscription for 3 months before each expiration.

- You can enable auto-renewal any time before the Dedicated HSM instance expires. By default, the system will make the first attempt to charge your account for the renewal at 03:00, seven days before the expiry date. If this attempt fails, it will make another attempt at 03:00 every day until the subscription is renewed or expires.

- You can still perform a manual renewal even when auto-renewal is enabled. After a manual renewal is complete, auto-renewal is still valid, and the renewal fee will be deducted from your account seven days before the new expiry date.

- By default, the system automatically deducts fees from your account 7 days before your instance expires. You can change the renewal payment date if needed, for example, 6 days or 5 days before the instance expires.

 For details, see **Auto-Renewal Rules**.

Prerequisites

The yearly/monthly Dedicated HSM instance is not expired.

Enabling Auto-Renewal During Purchase

You can enable auto-renewal on the page for purchasing Dedicated HSM instances, as shown in **Enabling auto-renewal**. For more information about purchasing Dedicated HSM instances, see **Creating a Dedicated HSM Instance**.

Figure 5-2 Enabling auto-renewal
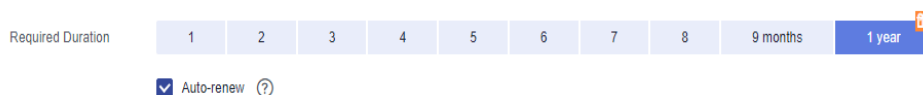
Enabling Auto-Renewal on the Renewals Page

Step 1 **Log in to the management console**.

Step 2 In the upper right corner of the page, choose **Billing & Costs** > **Renewal**. The **Renewals** page is displayed.

Step 3 Select the search criteria.

- On the **Auto Renewals** page, you can view the resources for which auto-renewal has been enabled.

- You can enable auto-renewal for resources on the **Manual Renewals**, **Pay-per-Use After Expiration**, and **Renewals Canceled** pages.

Step 4 Select the Dedicated HSM instance for which you want to enable auto-renewal and click **Enable Auto-Renew** in the **Operation** column.

Step 5 Select a renewal period and specify the auto-renewal times.

Step 6 Click **Pay**.

----End

6 Bills

You can view DEW bills on the **Billing** page in Billing Center. For details, see **Bills**.

Bill Generation

After you pay for a yearly/monthly resource, a bill is reported to the billing system in real time for settlement.

The usage of pay-per-use resources is reported to the billing system at a fixed interval for settlement. A pay-per-use resource is billed by the hour, day, or month, depending on the resource's usage type. For details, see **Periodic Settlement of Pay-per-Use Products**. The pay-per-use billing mode of KMS is settled by hour, and the pay-per-use billing mode of CSMS is settled by day.

📖 **NOTE**

If the billing date is the first or last day of a month, the fee is the usage of the entire month.

You are not charged immediately after a billing record is generated. For example, if a key (which is billed on an hourly basis) is disabled at 08:30, your expenditures for the hour from 08:00 to 09:00 will not likely be billed until about 10:00. On the **Billing Center** > **Billing** > **Transactions and Detailed Bills** > **Transaction Bills** page, **Expenditure Time** indicates the time when a pay-per-use product is used.

Viewing Bills of a Specific Resource

Step 1 Log in to the management console.

Step 2 In the upper right corner of the page, choose **Billing & Costs** > **Bills**.

Step 3 In the navigation pane on the left, choose **Transaction and Detailed Bills** > **Bill Details**.

Step 4 In the **Settings** area, click ⚙, select **Service Type**, then select **DEW** in the **Service Type** column. The system displays the bills of the service.

By default, expenditure details are displayed by usage and the statistical period is a billing cycle. You can also set other statistical dimensions and periods.

----End

7 Arrears

If there is not a sufficient account balance to pay for your bill and there is no other payment method configured, your account will go into arrears. If your account is in arrears, the service cannot work. You need to top up your account in a timely manner.

Arrears Reason

In pay-per-use mode, your account balance is insufficient.

Arrears Impact

- Yearly/Monthly

  This is a pre-paid billing mode, so you can continue using yearly/monthly Dedicated HSM instances even if your account is in arrears. However, you will not be able to perform other operations that may incur fees.

- Pay-per-Use

  If your account is insufficient to pay your amount due, your account goes into arrears, and the pay-per-use KMS enters the grace period. You need to pay the pay-per-use resource fees incurred during the grace period. To view the fees, go to the **Billing Center** > **Overview** page. The system will charge the fees once you top up your account.

  If you do not bring your account balance current before the grace period expires, the status turns to **Frozen** and enters a retention period. You cannot perform any operations on a pay-per-use KMS in the **Frozen** status.

  After the retention period ends, the DEW resources will be released and data cannot be restored.

Figure 7-1 Life cycle of pay-per-use DEW
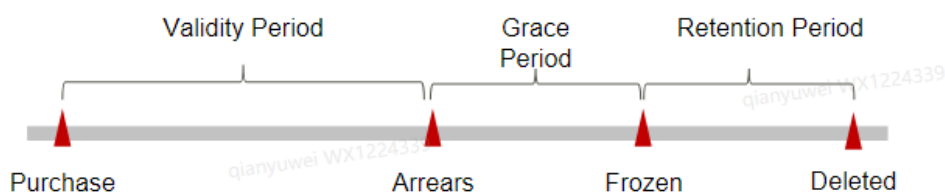
Avoiding and Handling Arrears

Top up your account in time. For details, see **Topping Up an Account**.

If data stored in the DEW is no longer used, you can delete it to avoid generating further expenditures.

To help make sure your account never falls into arrears, you can configure the **Balance Alert** on the **Overview** page of the Billing Center. Then, any time an expenditure quota drops to below the threshold you specify, Huawei Cloud automatically notifies you by SMS or email.

If your account is in arrears, top up your account in a timely manner.

8 Billing Termination

To prevent resource waste and unnecessary fees, you can stop billing for unused resources.

- Dedicated HSM instances charged in **yearly/monthly** mode can be unsubscribed.
- In the **pay-per-use** billing mode, when a key enters the scheduled deletion state, the billing is stopped.

Yearly/Monthly Resources

You pay for a resource billed in yearly/monthly mode, such as a yearly/monthly Dedicated HSM instance, when you purchase it. Billing automatically stops when the subscription expires.

- You can unsubscribe from a yearly/monthly resource before the subscription expires. Fees for unused resource will be refunded to you based on refund conditions, including the five-day unconditional unsubscription conditions and whether cash coupons or discount coupons are used. For details, see **Unsubscription**.
- If you have enabled auto-renewal but no longer wish to automatically renew the subscription, disable it before the auto-renewal date (7 days before the expiration date by default) to avoid unexpected expenditures.

Step 1 **Log in to the management console**.

Step 2 Click ⦿ in the upper left corner of the management console and select a region or project.

Step 3 In the navigation on the left, choose ☰ > **Security & Compliance** > **Data Encryption Workshop**.

Step 4 In the navigation pane on the left, choose **Dedicated HSM** > **Instances**.

Step 5 Locate the row that contains the target instance, and click **Unsubscribe** in the **Operation** column.

Step 6 Go to the edition management window and verify that the subscription to the asset quota that is billed yearly/monthly is canceled.

----End

Pay-per-Use Resources

In the **pay-per-use** billing mode, when a key enters the scheduled deletion state, the billing is stopped. For details, see **Deleting a Key**.

◯ NOTE

The system usually deducts fees of the last settlement period within one hour after resources are used. As a result, after a pay-per-use resource is deleted, the bill information may still exist. For example, if you delete DEW resources (which are billed on an hourly basis) at 08:30, the expenditures for the hour from 08:00 to 09:00 are usually not billed until about 10:00.

9 Cost Management

For pay-per-use and yearly/monthly DEW, costs for all billing items can be allocated by tags and enterprise projects.

Cost Management Through Enterprise Projects

Step 1 **Enable enterprise project.**

Complete real-name authentication, and then enable Enterprise Project. For details, see **Enabling the Enterprise Project Function**.

Step 2 **Create an enterprise project.**

Create an enterprise project based on your department or business needs. For details, see **Creating an Enterprise Project**.

Step 3 **Select an enterprise project when purchasing DEW.**

Select an enterprise project in the **Enabled** state for a newly purchased DEW service so that the costs of the DEW service will be allocated based on the selected enterprise project.

Figure 9-1 Selecting an enterprise project

Step 4 **View costs by enterprise project.**

When viewing cost data by enterprise project, you are advised to summarize data based on amortized costs. For details, see **Viewing Costs by Enterprise Project**.

----End

Cost Management Through Tags

Step 1 **Add a predefined tag.**

Go to the TMS console and create predefined tags. For details, see **Creating Predefined Tags**.

Step 2 **Activate cost tags.**

For details, see **Activating Cost Tags**. You can view activated cost tags on the **Cost Analysis** or **Budgets** page.

If you activate some tags, they will be used to organize your resource costs generated thereafter. If you want to use tags to analyze the cost data generated before tag activation, export the bill details file and analyze the data based on the **Resource Tag** field in the file.

Step 3 **Add tags to DEW resources.**

On the page for purchasing DEW, you can select a created predefined tag.

Figure 9-2 Adding a tag
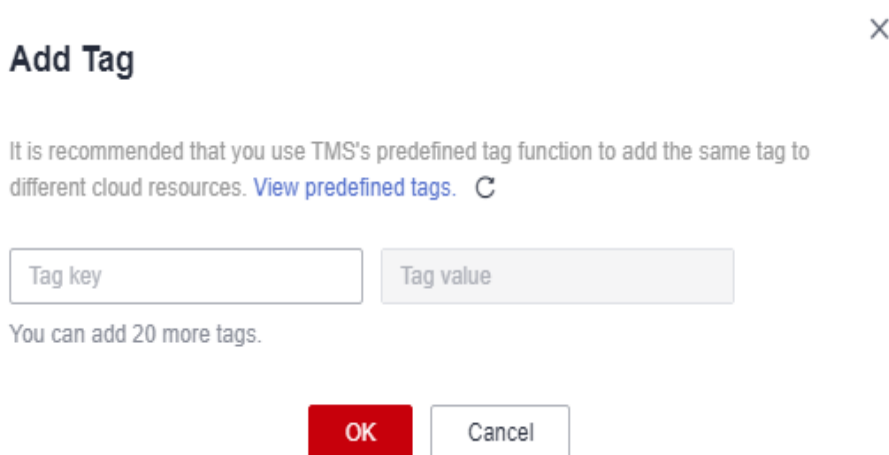
Step 4 **View cost data by the cost tag.**

For details, see **Viewing Costs by Cost Tag**.

----End

Cost Analysis

To precisely control and optimize your costs, you need a clear understanding of what parts of your enterprise incurred different costs. **Cost Center** visualizes your original costs and amortized costs using various dimensions and display filters for cost analysis so that you can analyze the trends and drivers of your service usage and costs from a variety of perspectives or within different defined scopes.

You can also use **Cost Anomaly Detection** provided by **Cost Center** to detect unexpected expenses in a timely manner. In this way, costs can be monitored, analyzed, and traced.

For details, see **Performing Cost Analysis to Explore Costs and Usage** and **Enabling Cost Anomaly Detection to Identify Anomalies**.

Cost Optimization

● **Cost control**

You can create different types of budgets on the **Budgets** page of Cost Center to track your costs against the budgeted amount you specified. If the budget

thresholds you defined are reached, Cost Center will send alerts to the recipients you configured. You can also create budget reports and specify recipients to receive budget alerts if any at a frequency you configured.

For example, an enterprise uses the KMS cost budget. The monthly budget amount is $2,000 USD. The system should send an alarm when the forecast amount is greater than 80% of the budget amount. You can refer to the following budget information.

Figure 9-3 Basic budget information
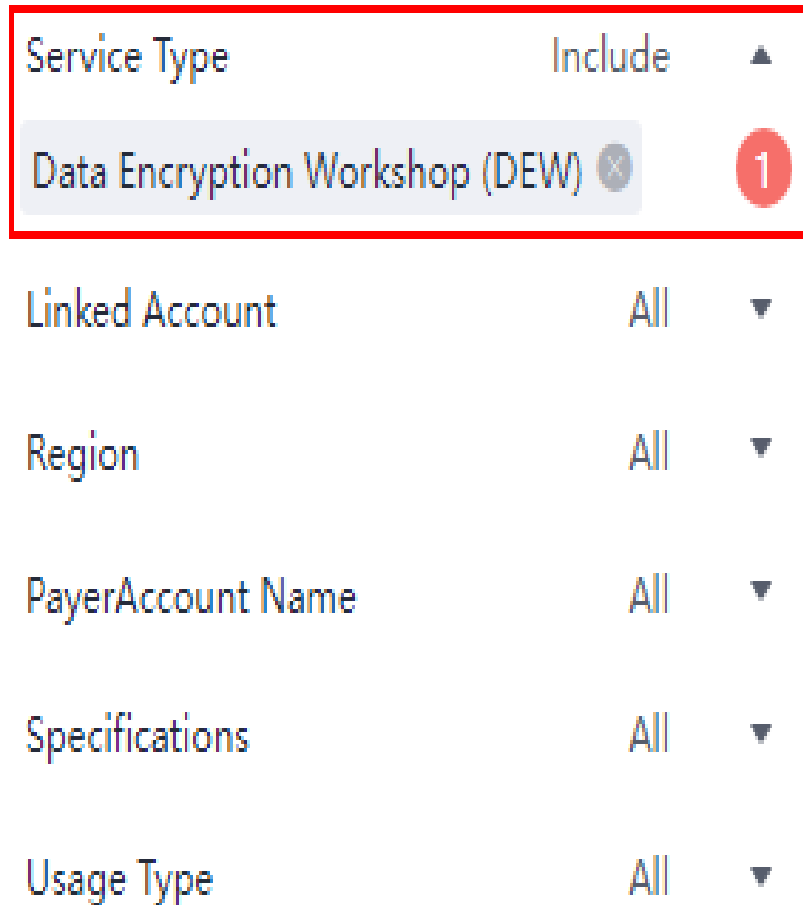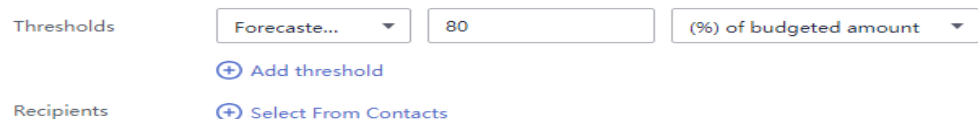
Figure 9-4 Defining the budget scope

Figure 9-5 Setting a budget alert

For details, see **Enabling Forecasting and Creating Budgets to Track Cost and Usage**.

- **Resource rightsizing**

  The cost center can monitor the historical resource usage of CFWs and provide customers with idle CFW resources identification and optimization suggestions to find cost saving opportunities. You can also identify resources with high costs based on the analysis results in the **Cost Analysis** phase and use Cloud Eye to monitor resource usage. By doing this, you can determine the causes of high costs and take optimization measures accordingly.

Related Operations

Creating a Budget: You can create budget reminders based on daily, monthly, quarterly, and yearly costs and resource usage. If your actual costs or usage exceeds the budget threshold you configured, you will receive an alert.

10 Billing FAQs

10.1 How Is DEW Charged?

For price details, see **Product Pricing Details**.

KMS

KMS is charged per use. No minimum fee is required. Once a CMK is created, it will be charged by hour. You pay for CMKs you created and API requests that are beyond the free-of-charge range.

KPS

- If you do not choose to let Huawei Cloud manage your private keys when creating or importing them, no cost will be incurred.
- If you have your keys managed by Huawei Cloud, KPS is charged by hour. In the current version, it is free of charge.

Dedicated HSM

Dedicated HSM offers monthly and yearly packages based on the edition and device models of instances you have purchased.

CSMS

You are charged based on the number of secrets, usage duration, and number of API requests.

10.2 How Do I Renew DEW?

This section describes how to renew KMS or a Dedicated HSM instance. After renewal, you can continue to use the KMS and Dedicated HSM instance.

- Auto-renewal

  If you have selected and agreed to auto renewal of KMS or Dedicated HSM, the system automatically generates a renewal order and renews the

subscription based on the original subscription period before the service expires.

- Manual renewal

  Before the service expires, the system will send an SMS message or email to remind you to renew it.

  If you do not renew the service before it expires, it will enter the retention period.

  ◻ NOTE

  If you do not renew your subscription before it expires, a retention period will apply. The retention period varies with customer tiers. For details, see **Retention Period**.

Table 10-1 Retention period

Service	Edition	Retention Period
KMS	Standard	Keys are frozen. Activate frozen keys by topping up the account.
Dedicated HSM	-	• Within the retention period, your Dedicated HSM instances cannot be used but are reserved for you. • If the retention period expires, your Dedicated HSM instances will be released.

◻ NOTE

- Frozen keys cannot be used for encryption or decryption. To prevent unnecessary losses, it is recommended that you renew the service in time.
- Data related to Dedicated HSM instances will get lost when the instances are released. To prevent unnecessary losses, it is recommended that you renew the service or top up the account in time.

Prerequisites

You have obtained the login account (with the **BSS Administrator** and **KMS Administrator** permissions) and password for logging in to the management console.

◻ NOTE

An account with the **BSS Administrator** permission can perform any operation on all menu items in the account center, billing center, and resource center.

Procedure

Step 1 **Log in to the management console**.

Step 2 Click [icon] in the upper left corner of the management console and select a region or project.

Step 3 In the navigation pane on the left, click ☰ and choose **Security & Compliance** > **Data Encryption Workshop**.

Step 4 In the upper right corner, click **Renew**.

Step 5 On the renewal management page, complete the renewal as prompted.

For details, see **Manually Renewing a Resource**.

----End

10.3 How Do I Unsubscribe from DEW?

DEW does not support unsubscription.

📖 **NOTE**

If you fail to create a Dedicated HSM instance, you can click **Delete** in the row where the failed instance locates to delete it. Then you can submit a service ticket to apply for refund.

Helpful Links

- **Unsubscription Rules**
- **List of Cloud Service Products That You Cannot Unsubscribe From**
- **Creating a Service Ticket**

10.4 Will a CMK Be Charged After It Is Disabled?

Yes.

A disabled CMK is still kept and maintained by KMS. You can enable it whenever you need it. Therefore, a disabled CMK is still billable. Only deleted CMKs are not charged.

10.5 Are Credentials Scheduled to Be Deleted Billed?

No.

A credential in pending deletion status does not incur charges.

If you cancel deletion, the charging resumes from the time when the credential was scheduled to be deleted.

10.6 Will a CMK Be Charged After It Is Scheduled to Delete?

No.

The pending period of a CMK from its scheduling till its deletion is not charged.

However, if you cancel the scheduled deletion, the charging resumes from the time when the CMK is scheduled to be deleted.

10.7 How Is RDS Encryption Billed?

Currently, RDS calls the EVS APIs for encryption purposes. KMS is called when an EVS disk is created or mounted. Data writing and reading do not call KMS. Generally, the number of times that EVS calls the KMS APIs does not exceed 20,000, which is free of charge, unless the EVS disk is mounted or unmounted maliciously.